

**HS2400  
Indoor Enclosure**

**Installation/  
Operation Manual**

**C1470M (9/97)**

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## REVISION HISTORY

<b>Manual #</b>	<b>Date</b>	<b>Comments</b>
C1470M	9/97	Original version.

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## 1.0 GENERAL

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### 1.1 IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by Qualified Service Personnel and conform to all Local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. Only use replacement parts recommended by Pelco.
4. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.
5. The installation method and materials should be capable of supporting four (4) times the weight of the enclosure, pan/tilt, camera and lens combination.

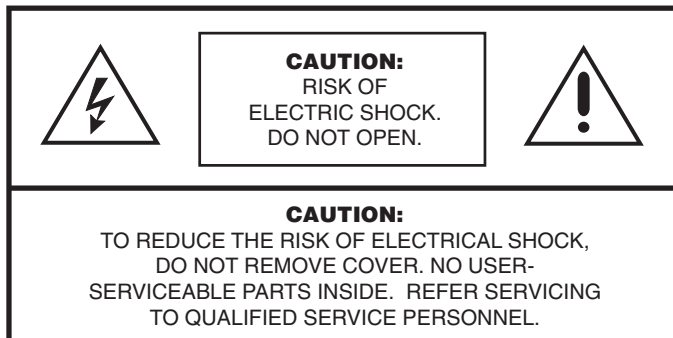
#### The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



**Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.**

## 1.2 UNPACKING INSTRUCTIONS

Unpack and inspect all parts carefully.

The following parts are supplied:

- 1 Camera enclosure
- 1 5/32-inch tamper-resistant hex key
- 1 1/4-20 x .5" bolt
- 1 1/4" flat washer
- 1 1/4" split lock washer

Be sure to save the shipping carton and any inserts. They are the safest material in which to make future shipments.

If an item appears to have been damaged in shipment, replace it properly in its carton and contact the factory at 1-800-289-9100 or 1-559-292-1981 for a replacement. (International customers fax 1-559-348-1120 for authorization and instructions.)

If an item needs to be returned to the factory for repair, consult the WARRANTY AND RETURN section of this manual for instructions.

## 1.3 RECOMMENDED TOOLS

Pelco does not supply basic tools needed for the installation process. The following tools are recommended:

- Hand tools
- Drill
- Coaxial cable stripper
- BNC crimp tool
- Wire cutter
- Wire stripper

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## 2.0 DESCRIPTION

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The HS2400 medium-security camera housing provides a low-cost, tamper-resistant corner mount for fixed camera applications. The HS2400 is designed to be installed flush against a ceiling. The smaller frontal area and reduced overall size create an unobtrusive enclosure that is ideal for today's smaller cameras. The HS2400 will accommodate Pelco box cameras with vari-focal lenses that do not exceed 8 inches (20.32 cm) in total length. Three conduit knockouts allow wires to be brought into the housing from the rear sides or the top.

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## 3.0 INSTALLATION

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Before mounting the HS2400, make certain that the mounting surface is capable of supporting four (4) times the weight of the enclosure plus camera and lens.

Determine the location of the enclosure and means of delivering all necessary cabling before beginning the installation process. Knockouts that will accommodate 1/2-inch (1.27 cm) conduit have been provided on both wall mounting surfaces and the ceiling surface.

### 3.1 FLUSH CEILING OR MID-WALL CORNER MOUNT

To install the HS2400:

1. Remove the two (2) tamper-resistant screws on the underside of the housing (using the hex key that is provided) and separate the cover from the mounting bracket. Remove the tilt table assembly.
2. Using the mounting bracket as a template, mark on the mounting surface eight holes for mounting the enclosure and, as required, holes for cabling. Drill the holes.
3. Attach the enclosure with eight 1/4-20 fasteners (not supplied).
4. Route cabling to the enclosure. Refer to Table A for the type of video coaxial cable to use. If your camera will use 24 VAC power, refer to Table B to determine the size of wire to use. If you are using conduit, attach it to the enclosure.
5. Mount the camera and lens to the tilt table assembly with the 1/4" bolt, flat washer and split locker washer that are provided. Install the completed assembly onto the mounting bracket.
6. Make all camera and lens connections and adjust the tilt table assembly and camera lens as necessary.
7. Replace the cover. Check that all components clear the cover and that camera angle and lens adjustments are satisfactory. When all adjustments are complete, secure the cover with the hex key that is provided.

**Table A. Video Coaxial Cable Wiring Distances**

Cable Type*	Maximum Distance
RG59	750 ft (229 m)
RG 6	1,000 ft (305 m)
RG11	1,500 ft (457 m)

\* Minimum cable requirements:  
 75 ohms impedance  
 All-copper center conductor  
 All-copper braided shield with 95% braid coverage

**Table B. 24 VAC Wiring Distances**

The following are the recommended maximum distances for 24 VAC applications and are calculated with a 10-percent voltage drop. (10-percent is generally the maximum allowable voltage drop for AC-powered devices.)

**EXAMPLE:** An enclosure that requires 80 vA and is installed 35 feet (10 m) from the transformer would require a minimum wire gauge of 20 Awg.

**NOTE:** Distances are calculated in feet; values in parentheses are meters.

		Wire Gauge						
		22	20	18	16	14	12	10
Total vA consumed	10	178 (54)	283 (86)	451 (137)	716 (218)	1142 (348)	1811 (551)	2880 (877)
	20	89 (27)	141 (42)	225 (68)	358 (109)	571 (174)	905 (275)	1440 (438)
	30	59 (17)	94 (28)	150 (45)	238 (72)	380 (115)	603 (183)	960 (292)
	40	44 (13)	70 (21)	112 (34)	179 (54)	285 (86)	452 (137)	720 (219)
	50	35 (10)	56 (17)	90 (27)	143 (43)	228 (69)	362 (110)	576 (175)
	60	29 (8)	47 (14)	75 (22)	119 (36)	190 (57)	301 (91)	480 (146)
	70	25 (7)	40 (12)	64 (19)	102 (31)	163 (49)	258 (78)	411 (125)
	80	22 (6)	35 (10)	56 (17)	89 (27)	142 (43)	226 (68)	360 (109)
	90	19 (5)	31 (9)	50 (15)	79 (24)	126 (38)	201 (61)	320 (97)
	100	17 (5)	28 (8)	45 (13)	71 (21)	114 (34)	181 (55)	288 (87)
	110	16 (4)	25 (7)	41 (12)	65 (19)	103 (31)	164 (49)	261 (79)
	120	14 (4)	23 (7)	37 (11)	59 (17)	95 (28)	150 (45)	240 (73)
	130	13 (3)	21 (6)	34 (10)	55 (16)	87 (26)	139 (42)	221 (67)
	140	12 (3)	20 (6)	32 (9)	51 (15)	81 (24)	129 (39)	205 (62)
	150	11 (3)	18 (5)	30 (9)	47 (14)	76 (23)	120 (36)	192 (58)
	160	11 (3)	17 (5)	28 (8)	44 (13)	71 (21)	113 (34)	180 (54)
	170	10 (3)	16 (4)	26 (7)	42 (12)	67 (20)	106 (32)	169 (51)
	180	9 (2)	15 (4)	25 (7)	39 (11)	63 (19)	100 (30)	160 (48)
	190	9 (2)	14 (4)	23 (7)	37 (11)	60 (18)	95 (28)	151 (46)
	200	8 (2)	14 (4)	22 (6)	35 (10)	57 (17)	90 (27)	144 (43)

Maximum distance from transformer to load

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## **4.0 MAINTENANCE**

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Clean the window regularly to help maintain picture clarity. Use a soft cloth and a mild nonabrasive detergent.



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## 5.0 MECHANICAL PARTS LIST

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Item No.	Qty	Description	Part Number
1	1	Mounting plate	HS24004002COMP
2	1	Front cover	HS24001000WA
3	1	Window	HS240010000
4	2	Button-head tamper-resistant screw	ZH1/4-20X.50TSS
5	5	Nut, 4-40	ZH4-40NUTSH
6	5	Flat washer	ZH125X312X32S
7	1	Tilt table support leg	DF54001COMP
8	1	Tilt table	DF54002COMP
9	2	Nut, 1/4-20	ZH1/4-20NUTCH
10	2	Split lock washer, 1/4"	ZH1/4LWSSL
11	2	Fender washer	ZH255X1.50X62
12	1	5/32-inch tamper-resistant hex key	ZTHEXKEY5/32

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## 6.0 SPECIFICATIONS

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### **MECHANICAL**

Camera Mounting: Adjustable tilt table

Maximum  
Camera/Lens

Size: Accommodates camera/lens combinations  
(including BNC connector) up to:

8.0" L x 4.0" W x 4.0" H (20.32 cm x 10.16 cm x 10.16 cm)

Viewing Window: 1/2" (1.27 cm) thick, optically clear Lexan™ plastic that is  
impact and scratch resistant

Window

Viewing Area: 4.25" x 2.56" (10.8 cm x 6.50 cm)

Cable Entry: Ø.875-inch (2.22 cm) knockout access through rear walls and  
top. Knockouts accept 1/2-inch (1.27 cm) conduit.

Enclosure

Mounting: Eight (8) Ø.250-inch (.635 cm) mounting holes on protected  
rear surfaces

### **GENERAL**

Construction: 10-gauge steel

Finish: Gray polyester powder coat

Dimensions: See Figure 1

Environment: Indoor

Unit Weight: 17.90 lbs (8.12 kg)

Shipping Weight: 19.30 lbs (8.76 kg)

Rating: NEMA 1

*(Design and product specifications subject to change without notice.)*

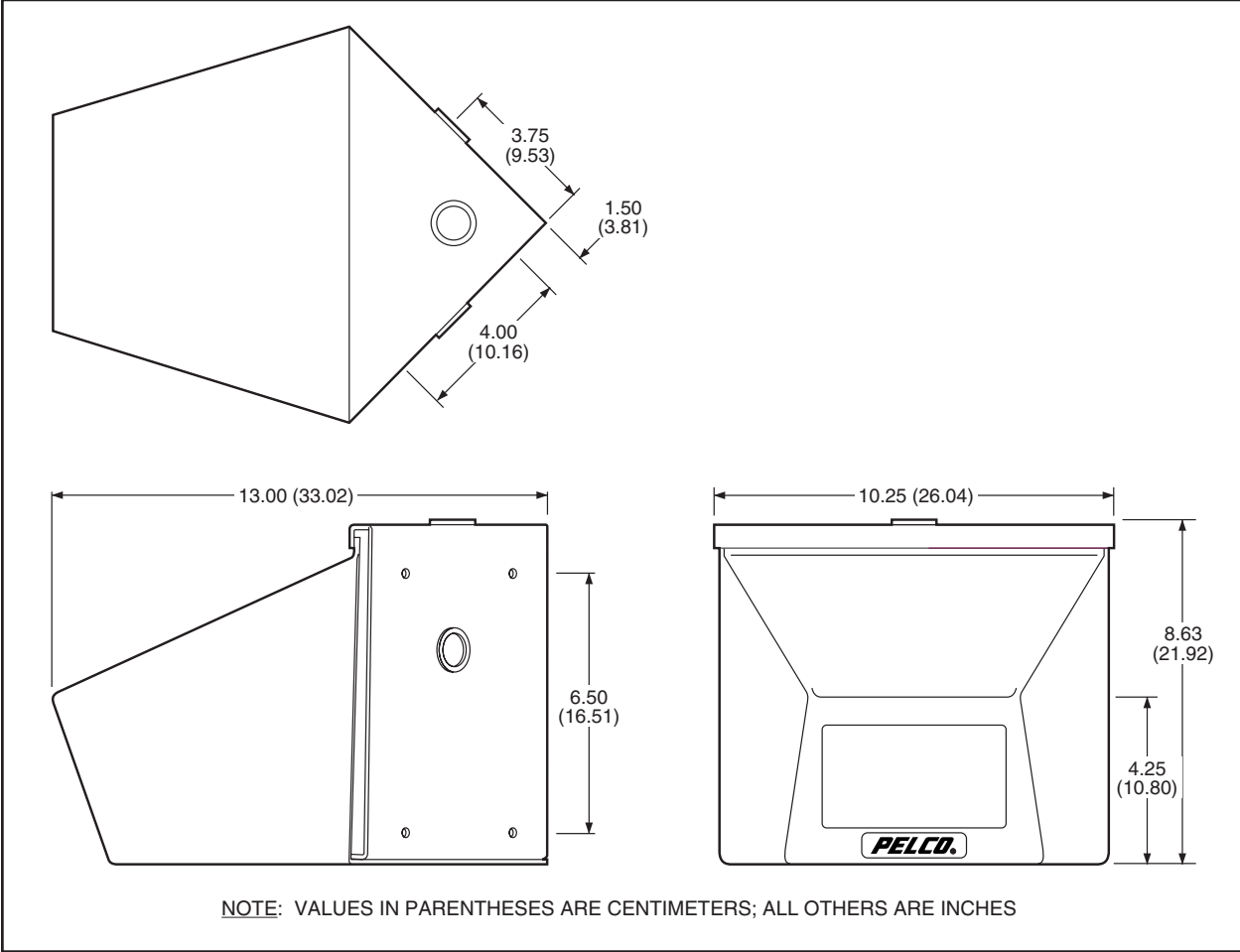


Figure 1. HS2400 Dimension Drawing

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## 7.0 WARRANTY AND RETURN INFORMATION

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### WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura™ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned. Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

### RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge. Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department  
Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors  
473 Eccles Avenue  
South San Francisco, CA 94080 USA  
Phone: 650-737-1700  
Fax: 650-737-0933

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